

KPMG Dynamic Risk Assessment

The Power of Four Reimagined: Pre-empting risks through dynamic analysis of contagion points

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IDENTIFY, CONNECT AND VISUALISE RISK IN FOUR DIMENSIONS (Likelihood, Impact, Velocity, Connectivity)

Dynamic Risk Assessment ("DRA") supplements traditional risk assessment methodologies, without replacing them, by (1) incorporating future trends and their potential downstream threats to organisations and (2) expanding the analyses of risks to identify their future expected pathways of contagion and expected velocity. This is achieved through the application of scientific research into quantitative reasoning and applying the results to generate a quantitative cognitive risk network, which is then analysed and gauged.



With the exceptional volatility of today's business climate, proactively managing risk is a constant challenge. In a highly integrated world, we have reached a point where traditional risk management methodologies that only focus on assessing the likelihood and severity of single points of risk are insufficient. Traditional risk models do not capture contagion relations between risks, nor do they provide a means of holistically quantifying and estimating the cause and effect of structural shifts, macroeconomic trends, and internal risks.

KPMG's DRA marks a ground-breaking shift in risk identification. DRA is developed to provide businesses with a better understanding of the risks their organisations face in today's complex world of developing technology, emerging markets, geopolitical tensions, climate change, growing populations and other megatrends that interact and share our future. In understanding these impacts, business can be in a place to make better decisions and identify areas of prioritisation in terms of further risk mitigation and the opportunities for recovery that can be made.



KPMG works with a team of data scientists, mathematicians and economists to use DRA to advise across following areas:

1 Elevate ERM framework maturity



Using DRA, for example through the most vulnerable risks and tendrils analyses, to focus on the **velocity** of both individual risks and risk clusters (i.e. when there is contagion). DRA also aims to gauge and reveal the greatest systemic risk exposures, combinations and risk clusters, which allows the development of an informed and targeted risk mitigation plan and response.

2 Assess ESG impact and issues



Using DRA, for example through potential black swans and existential risks analyses, to understand **ESG megatrends and risks** that are related to them e.g. flooding, fire, frequency and severity of extreme weather, which commonly don't manifest in isolation. DRA can facilitate climate risk assessment, providing insights on focus areas and how to prioritise response plans and make informed decisions.

3 Strategic planning for the future



Using DRA, for example through aggregate systemic risk mapping and existential risk analyses, to understand **interconnectedness**. This enables management to understand which risks have the strongest connections and, hence, where resources should be allocated to reduce the organisation's vulnerability. With DRA, those insights can be unlocked and the results can be taken into consideration when formulating future strategic goals.

4 Tackle supply chain challenges



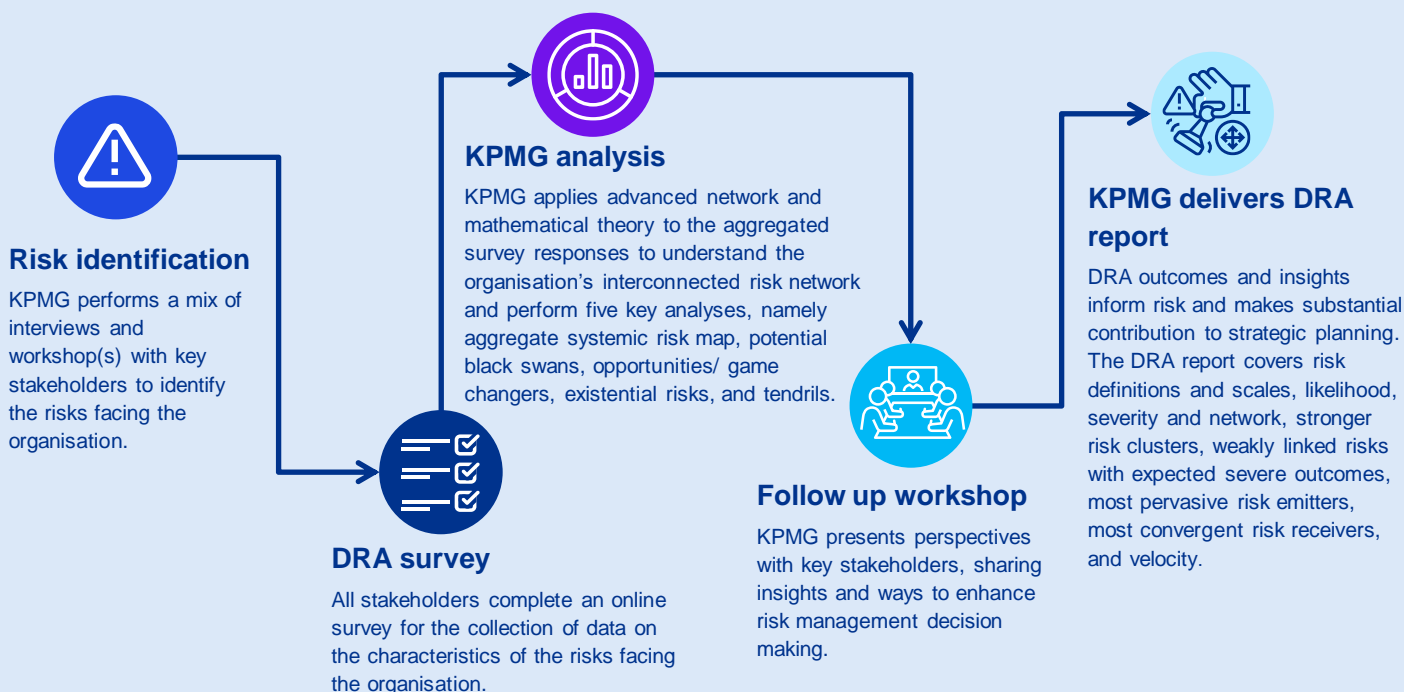
Using DRA to understand the potential **dependencies and vulnerable points** in supply chains which affect operations. DRA can help organisations to understand the impact that supply chains may have on their businesses and how they can mitigate risks. DRA expands the risk analysis to identify future expected pathways of contagion and expected velocity, enabling a better understanding of the impact upstream and downstream, as well as the impact that distribution partners may have on the company, ultimately helping to build organisational resilience.



"The significant threats/greatest risk exposure may not be the risks with the highest individual impact, but rather those risks that have the most significant connection with other factors and can trigger additional risks within a short period of time."



DRA Process



Contact us

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